Admiral Ammen's Story of a Mutiny Which the boatswain, Mr. Bell, whom I had previously

whose nerve and decision once saved a ship and a thousand way for the purpose of forcing the galeway.

the attempt to foist upon them an objectionable motor the capitalists will discover promptly that they can afford to supply the best forms of rapid transit motor that the world can furnish.

sum ted cable and fed automatically to successive short sections of the road as the car passes over each section. The loss of current by leakage from miles of exposed wire is by this device avoided and the leakage reduced to a minimum. It appears that all the various forms of im-In Washington, where the law forbids the erection of any more overhead wires within the city limits, and where public opinion has decreed and is working the extinction of the car horse, the development of the street rail.

In appears that all the various forms of improved motor, including that which bestows a unique distinction upon Buda-Pesth, are now being or are soon to be thoroughly, practically and extensively used in Washington. The capital is already notable as the only city in the world in which the improved record with the control of the street rail.

proved grooved rail has entirely superseded the projecting, wheel-wrenching T rail. Wash-ington has within the last twenty years developed in many features of beauty, progressiveness and good government into the model American city, which the people of the report side by a lattice, in which there is a gate-way; and by the rules of the vessel all steerage passengers are forbidden to come abaft these bulkheads. The men composing the draft were steerage passengers. Owing to the crowded state of the steerage the starboard side of the spar deck, under the hurricane deck, was ap-propriated exclusively to the men under my public visit not only with pleasure and grat-ified pride, but also with substantial profit in hints derived concerning modern municipal development which may be utilized at home. t is well within the bounds of probability that Vashington, combining in its municipal policy the push and progress of the new with the solidity and safety of the old world, will in the near future become in the matter of local rapid transit the model city, not only of THEY WANTED WHISKY.

"About midnight that night I was called and told that my people wished to see me. I at once dressed and went on deck, where I was met by four men, two of whom I remember as John Kelley and Alfred Bussell, scamen (the deceased), who told me they were uncomfortable, had no place to sleep, and therefore had to wander about the decks; they finally said that whisky would make it all right. I replied that America, but of the world, to which students from all parts of the globe will resort for sug-gestions concerning the latest and best forms

tion, as it would make all wrong.

"They left without any manifestation of disappointment or anger, perhaps impressed with the idea that the interest I had expressed was it is to aid others in fighting him may that he has already gained a foothold in London. They position I have to care for the comfort and explain that not for many years until now has

the draft that I asked expressed themselves satisfied with their breakfast, although I found on inquiry that no vegetables had formed a part of it. I soon made a request to Capt. Tinkle-paugh on this subject, which he at once agreed to I the afternoon at dinner there was discontinuously the contrast between the poverty of primitive agriculture and the progress in civilization and wealth resulting from high development of all the possibilities of land and labor in rural and the possibilities of land and labor in rural and the possibilities of land and labor in rural and the possibilities of land and labor in rural and the possibilities of land and labor in rural and the possibilities of land and labor in rural and the possibilities of land and labor in rural and the possibilities of land and labor in rural and the possibilities of land and labor in rural and the possibilities of land and labor in rural and the possibilities of land and labor in rural and the possibilities of land and labor in rural and the progress are the possibilities of land and labor in rural and the progress in civilization and wealth resulting from high development of all the possibilities of land and labor in rural and the progress are th to. In the afternoon at dinner there was dis-satisfaction, at least on the part of twelve or fifteen, who threw overboard a number of pots and pans containing food, and beat and abused the servants of the ship until they refused to do ... Game was abundant early in the containing to the servants of the ship until they refused to do ... Game was abundant early in the containing the con the servants of the ship until they refused to do duty. Chief among these twelve or fifteen were Kelley and Bussell. The object was probably to be better disposed men from getting pound. Bear meat was very slightly higher. prevent the better disposed men from getting anything to eat and thus to make the dissatis-

belonging to the draft to react and replenish the tables, and thus prevented the well disposed from suffering. The captain of the vessel was, not without cause, seriously concerned on account of this mutinous conduct and the very menacing and disrespectful expressions of my men, and told me he felt much disposed to put into Hampton Roads and put on shore at least twelve or fifteen if not all of the deaft. While

men, and told me he felt much disposed to put into Hampton Roads and put on shore at least twelve or fifteen, if not all, of the draft. While I had to admit that the conduct and language of some of them were very mutinous and disrespectful, I told him I hoped he would not do this; that the delay would be great, and that I felt satisfied we could control the men.

"The following morning (Sunday, 15th) the men appeared to be entirely sober, the supply of liquor obtained through the steerage passengers having probably given out. Their breakfast consisted of hard bread, boiled salt beef of good quality, tea or coffee and hominy and molasses. I was in the act of inspecting their breakfast when I was asked to do so by Alfred Bussell, seamen (the deceased), in the most disrespectful terms and manner. After my inspection I became convinced that the object of the men was a difficulty irrespective of any treatment which it was in my power to have bestowed upon them.

DETERMINED TO MUTINY.

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DETERMINED TO MUTINY.

"Soon after breakfast I heard John Kelley and Alfred Bussell in conversation with Boatswain Bell, my assistant in charge of the draft.

nothing to sell. Every locality, in its industries and products, existed for and by itself, having They declared that they had eaten nothing since they had been on board, and that if their dinner was not such as they wished they certainly would go aft in the cabin and get what

that they regarded me as a very well-disposed person; that he felt satisfied I would do any-thing in my power for their comfort, and thorefore I had not been harmed. The conver-sation and manner of the men convinced me

there are in the United States at the United States and in some conduit motors that are as good as and in some respects better than these European devices. But they have been viewed as not so desirable, i. e., not so cheap as the trolley, and, speaking generally, they have on this side of the water been merely experimented with in a half-hearted way rather than adopted and practically used. It is only necessary that our electric and street railway companies shall cease to suppress the following this section and will soon have it ready to operate with an underground electric conduit to ready to operate with an underground electric conduit to ready to operate with an underground electric conduit. It is only necessary that our electric and street railway companies shall cease to suppress the following this section of the be used upon the portion of this line within the city of Washington when it is constructed. In this electric conduit system there is no continuous conductor of exposed wire as in other system. No marine guard or other assistants was the result.

Admirial Amanda that tried and acquitted him.

"I was ordered by the Navy Department, said the admiral, "to take passage on the Ocean Queen on Friday, May 18, 1864, to receive on board that vessel and take charge of a draft of 200 men, intended for the Pacific squadron, to be used upon the portion of this line within the law imposed upon me. Idid the duty that the law imposed upon me. Idid the duty that the law imposed upon me. Idid the duty that the law imposed upon me. Idid the duty that the law imposed upon me. Idid the duty that the law imposed upon me. Idid the duty that the law imposed upon me. Idid the duty that the law imposed upon me. It do not be stated to five the order to fire upon board that vessel and take charge of a draft of 200 men, intended for the Pacific squadron, to see the post of the court

owed a duty to their country and their flag.
Three loud and spontaneous cheers greeted me, apparently from every man composing the dark. The men were now directed to go to dinner. They obeyed without excitement or confusion.

"I had previously requested Capt. Tinkle-way; and by the rules of the yeared all steerage.

faction more general.
"I at once detailed a number of the blacks

tainly would go aft in the cabin and get what they desired. Kelley said he had once aided on board of a vessel of war to knock down a sentry over a spirit room, and that they intended to do as well on board of the Ocean Queen; that he knew there was liquor on board and he intended to have it.

The was very little money to purchase any thing more than the bare necessaries. The industrious family had an abundance of everyoner a spirit room, and that they intended to do the household could produce, such furniture as could be made on the place or in the neighborhood, and little else.

"The conversation, though addressed to Mr. "The conversation, though addressed to Mr. Bell, was loud enough and evidently intended for my ear. I replied that I hoped their dinner would be all they could ask, that I had spoken to the captain on the subject, but that their proposition to go aft and help themselves was quite out of the question, and if there was an attempt of that kind they would certainly be shot. They contemptuously replied that they were quite accustomed to being under fire and felt no alarm whatever and Kelly said that they regarded me as a very well-disposed told of a letter found at Dumbarton addressed to "The manager of the public house with Walker's sign" at Walverhampton. Some odd particulars were added, which probably furnished the requisite clue, the result being that the missive reached the person for whom it was intended.

In another case a postal card was inclosed to "I did not reply to the last remark, so insulting to my position and to the obligations which

In another case a postal card was inclosed to a provincial postmaster to be delivered to the writer's "nephew." The individual was to be identified by the possession of a cork log and "a bright projecting set of teeth." The description sufficed, though the "nephew" had to be found among a population of more than 70,000. The "usual eccentricities" have also presented themselves.

Among these was a parcel containing above the c

ened by the persistent knocking of the trolley advocates at the municipal doors to the necessity of finding some substitute for the car horse and of adopting the best means of securing rapid transit, whatever that should turn out to be. But the avaricious action of the electric and some street railway corporations in attempting to extend the trolley's application and use far beyond its natural sphere, and in cramming it willy nilly down the throats of some of our large cities, assuring the struggling victims that it is pretty, harmless and pleasant to the urban taste, has developed a popular antipathy to it which sometimes prevents proper appreciation of its real merits in its appropriate field of operation.

The combination behind the trolley is very strong; since the amalgamation of the Edison

The combination behind the trolley is very strong; since the amalgamation of the Edison and Thompson-Houston companies its power is tremendous. Among the Atlantic coast cities Boston has fallen a victim, Philadelphia is struggling in the combination's clutches, nearly overpowered, Baltimore has been partly captured and New York has been recently threatened. At one time last session the House of Percent in the combination of the Edison and Thompson of the combination of the Edison and Thompson of the Combination of the Co of Representatives even authorized the intro-duction of the trolley into the heart of Washington, whose smooth streets and partly successful crusade against existing overhead wires caused it to deserve more considerate and wiser treatment. Washington was saved only by an intelligent public opinion and the firmness of the Senate.

THE STRONG FIGHT IN BEHALF OF THE TROLLEY. The controversial warfare in behalf of the trolley is waged with much skill and ingenuity, and also at considerable expense, since the newspapers charge high advertising rates for the publication of such matter as trolley affidavits in the local columns. The trolley argument assumes that the overhead system and rapid assumes that the overhead system and rapid transit are identical, that the choice of motive power is between the ancient mule and the trolley, and congratulates those who accept the latter as enterprising and progressive, and de-nounces those who do not as old fogies. It of course ignores the fact that the trolley is a mere makeshift and temporary device, the crude be-ginning of practical electric motors, still valuable in sparsely settled localities which can afford nothing better, but as much out of place afford nothing better, but as much out of place in our large cities at this day as the first loco-motive would be on any of our great trunk lines. Rapid transit in general is an indication of progressiveness. But circumstances and conditions determine whether rapid transit by rolley is progressiveness or old fogyism. In the cross roads village it is the former; in the metropolis it is the latter. The next step of the trolley argument is to pronounce the trolley current harmless, and to submit a volume of affidavits from employes who find amus-ing, profitable and healthful recrea-tion in permitting the current to play through their frames, and in swearing to the fact. Those who have the misfortune to be killed by the current, like the man struck by the West End road's lightning in Boston last winter, and the lineman in Port Huron, Mich., this summer, say never a word. It is probably possible to habituate the human frame to electric shocks, so that the force of a current electric shocks, so that the force of a current can be endured which would almost certainly kill a novice undergoing his first shock. The fact that one can accustom himself to the use of poison by taking gradually increasing doses

public to be struck by lightning because some nen have been shocked and still live. HOW MANY VOLTS WILL KILL. It is impossible for anybody to say what is

ton and Georgetown railroad, has adopted the PARIS PNEUMATIC CAR. cable system and has 10.26 miles of double and .55 miles of single track of this construction of the finest modern type. The next road in importance, the Metropolitan line, has selected the storage battery and has spent much time and money in perfecting this system. The change from horses to a mechanical motor must be made upon this line before July 22, 1893.
When in practical operation with its 8.36 miles of double and 2.35 of single track this will be the most extensive

and most notable storage battery system in the world. The road claims for its inventions of poison by taking gradually increasing doses and in time swallow with impunity a quantity that would in the beginning have certainly that would in the beginning have certainly killed him does not justify the scattering of may enjoy when the flats are fully converted arsenic or strychnine in such fashion as to expossible indestructible; in improvements in the lightness of the batteries, and cars, the weight being reduced almost one-half; in length of life of the batteries, they being as nearly as possible indestructible; in improvements in the lightness of the batteries and cars, the weight being reduced almost one-half; in length of life of the batteries, they being as nearly as possible indestructible; in improvements in the lightness of the batteries and cars, the weight being reduced almost one-half; in length of life of the batteries, they being as nearly as possible indestructible; in improvements in the lightness of the batteries and cars, the weight being reduced almost one-half; in length of life of the batteries, they being as nearly as possible indestructible; in improvements in the lightness of the batteries and cars, the weight being reduced almost one-half; in length of life of the batteries, they being as nearly as possible indestructible; in improvements in the lightness of the batteries and cars, the weight being reduced almost one-half; in length of life of the batteries, they being as nearly as possible indestructible; in improvements in the lightness of the batteries and cars, the weight being reduced almost one-half; in length of life of the batteries, they being as nearly as possible indestructible; in improvements in the lightness of the batteries and cars, the weight being reduced almost one-half; in length of life of the batteries and cars, the weight being reduced almost one-half; in length of life of the batteries and cars, the weight being reduced almost one-half; in length of life of the batteries and cars, the weight being reduced almost one-half; in length of life of the batterie have been permitted to prevent the extensive practical use of this motor. An extremely successful storage battery system of an improved pattern is also said to be in operation between Melford and Hopedale in Massachusetts. Washington has an actual as well as a proposed stor-Eckington suburban road into the heart of the

battery line, as the G street extension of the

storage battery and the pneumatic motor have

underground electric conduit, in that they sup-

WASHINGTON GIVES AS WELL AS TAKES A HINT.

ways in respect to motive power is most interesting. The capital's leading line, the Washing-

> gestions concerning the concerning t PROPHECIES OF SUFFERING.

The Destitute of London Have Prospects of

spectre only less terrible. A great Hunger will soon invade Britain. The signs of his coming are everywhere. Those whose business explain that not for many years until now has as there been genuine distress in the metropolis ical due to great commercial and economic causes.

well being of those under my command and which I regard as a not unimportant part of the duty of all officers under whom men are placed.

THE DEPARTMENT OF AGRICULTURE the duty of all officers under whom men are placed. and in cheapness of operation. It thinks that Poor and destitute there always are in large it has obviated the difficulties which heretofore numbers, but their sufferings for a long time numbers, but their sufferings for a long time have been due to individual and special causes. Thousands of skilled workmen, in almost all trades, are now idle, through no fault of their own. The evil has grown gradually. Attention has not been called to it by the sudden discharge of great bodies of men. Working forces have been cut down gradually and the process city, 1.17 miles in length, uses to the general satisfaction of the public this system. The textile clothing and printing trades are storage battery and the pneumatic motor have dull almost beyond precedent. A larger prothe advantage over the cable and trolley and portion of men are idle in the shipbuilding en-

underground electric conduit, in that they supply each car with individual motive power, and it is not possible through an accident to a cable for fifteen months, but in September things took a much sharper downward turn. a gloomy report of the situation. The chari-table agencies have for some time been sound-ing the alarm. Of the twenty-two chief trades ing the alarm. Of the twenty-two chief trades unions in London only two, in answer to inquiries, report trade as good. Nine consider it moderate and eleven having the greatest membership report it bad. That the hunger point has already been reached is indicated by such incidents as this:

I took a cab with luggage on top the other day from Holborn to Bayswater. Two men fol-lowed the vehicle on foot almost the whole dis-tance, three miles, in the hope of carning a few pence by unloading the baggage. They ran at a brisk trot alongside and reached the destination so much exhausted that they were unable at first to carry the trunks into the house. Their weakness was so extreme and the pallor of their faces so unnatural after violent exercise that I questioned them. Both said they had families and that they had not tasted food that day. I believe they told the truth.

The incident of following a cab was not singular. The army of unemployed is so large that no cab bearing baggage drives through the streets of London without being followed by some poor fellow seeking a few coins for food or.

perhaps, drink. perhaps, dring.
It is apparent already that existing relief machinery will not be adequate for the emergency coming winter.

The coroners have investigated several case of actual death by starvation in the last month. Distress is sure to be acute and widespread, and there will be many pitiful tales to make Christmas a holiday more of sorrow than of gladness. The cause of it all is commercial rather than financial depression. There is considerable im-provement visible in financial affairs. Capital provement visible in financial affairs. Capital is becoming more confident and venturesome, and the strictly financial market is distinctly in better condition than a few months ago, but the commercial outlook is not encouraging. There is reason to fear that things will continue to go from bad to worse. Furthermore, the crop now being harvested is, on the whole, the poorest for half a century.

Oddities of the British Post Office. From the London Daily News.

The severer duties of the post office are lightened from time to time by sundry "curious incidents," of which a few are recorded in the annual report. In the present instance we are told of a letter found at Dumbarton addressed

scription sufficed, though use contribution of more user to be found among a population of more user.

70,000. The "usual eccentricities" have also presented themselves.

Anong these was a parcel containing above 500 leoches from abroad. Other consignments included live snakes, frogs, tame rats and a live should appear unless they wished to be particularly as the found of the particular themselves from the scene, and all use should appear unless they wished to be particularly appear to the subject appea

Put in Jeopardy the Lives of a Thousand
Passengers — The Mutineers Demanded
Whisky, but Received Bullets—Nervy Conduct of the Officers of the Ship.

The Boatswain, Mr. Bell, whom I had previously instructed so to do, called the principal maicontents to look at and pronounce upon it. It consisted of very good fresh roast beef, boiled potatoes, hard bread of excellent quality and tea or coffee. John Kelly and Alfred Bussell pronounced the dinner satisfactory, and added, Proposition of the Content o HERE IS AN ADmiral of the navy now
living near Washington
whose nerve and de-

THE ORDER TO PIRE. "These men new proceeded to the port gang-

singurements, the trolley poles and wires are street obstructions and disfigurements, the trolley poles and wires are street obstructions and disfigurements, the trolley poles and wires are highly ornamental decorations, adding scenic attractions to the streets favored by their attractions to the streets favored by their safeties presence. The increased danger from fire and the obstruction to the operations of the firemen supplied by the overhead construction, which increase the insurance rates in some places where the trolley prevails, are generally guored in the argument.

WHERE UNLIE BAM IS VILNEBABLE.

The rebuke of the European lessons to America on the subject of municipal rapid transit and improved motors that will be well within their means, have studied to cheapen the cost of this kind of our capitalists and not the capacity of our capitalists and not the capacity of construction. A plan has been submitted to the Columbia, for instance, of using one construction. A plan has been submitted to the Columbia, for instance, of using one construction. A plan has been submitted to the columbia, for instance, of using one construction. A plan has been submitted to the columbia, for instance, of using one construction. A plan has been submitted to the columbia, for instance, of using one construction. A plan has been submitted to the Columbia, for instance, of using one construction. A plan has been submitted to the columbia, for instance, of using one conduit do the work of the construction of the water is a supplied to double track. But they have been viewed as not so desirable to double track to a supplied to double track to

cane deck and informed the men under my command that I had a word to say to them. When they had assembled I stated that an atwere assigned. The draft came from Philadelphia, and (although it was not in evidence) was principally composed of men who had been transferred from the army a short time before. The Ocean Queen left the wharf at New York at about 1 o'clock p. m. She had on boardabout one thousand and forty passengers, excluding the draft; about one-third were women and children. It had been arranged that the draft should be received on board after the steamer had left the wharf, and it was so done. owed a duty to their country and their flag

spar deck, under the hurricane deck, was appropriated exclusively to the men under my charge. Although crowded, I should have much preferred at that season of the year and for that voyage, living and sleeping there, to occupying a berth in the steerage.

any aid or support, I went among the principal men who had shown a mutinous disposition and ordered five of them upon the hurricane deck, stating that I wished to have them put in irons. Four made no reply: the lifth said he would not obey my order, but changed his mind when I told him that he would obey

The Destitute of London Have Prospects of a Terrible Winter.

London Cable to the New York Sun.

The great Death has been devastating the continent without mercy this summer, but England must prepare for the coming of a terrible winds, was quite out of the question, as it would make all wrong.

Wander about the decks: they finally said that others on board who were cognizant of the facts. Capt. Ammen returned to New York in the Ocean Queen and immediately asked for a day or two we would be in a pleasant latitude, court-martial, which was granted, and he was tried at Brooklyn. The court acquitted him and said that he had discharged his duty as an officer of the United States navy in the suppression of a mutiny.

> HOW PEOPLE USED TO LIVE. Wages and the Cost of Living in This Coun-

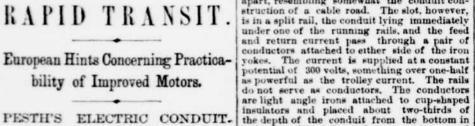
try 100 Years Ago. industrial arts and industries. The small wages

Pigeons were in extraordinary abundance, selling at a little more than a cent a piece. Elderly readers will remember the flights of flocks of



The proprietor (hard of hearing, but sha 'I'll have to raise that young man's se throws his whole soul into the





Lessons for America—The Overworked Trol-

ley Neither Essential Nor Desirable for

ton as a Model Street Railway City.

UR NATIONAL BOAST IS THAT nothing is impossible to American inventiveness, that what other peoples have failed or neglected to achieve we accomplish speedily and thoroughly. A table exception to this national self-confidence is found apparently in the great electric companies and many street railway magnates, who declare with one accord in a electric railway motor but the trolley can be made commercially practicable in America, and that the only substitute for the antiquated car horse that American ingenuity can devise, even for our large cities, is this aggravation of the overhead pole and wire evil. Are we amusing ourselves with a baseless national conceit when we plume ourselves on our superior inventive Or are those who announce the national incapacity to devise and work an improved and unobjectionable motor amusing themselves with motives of self-interest at the expense of the public? These questions arose again and again in my mind this summer as I rode in succession over a compressed air railway in Paris, a storage battery railway at The Hague, Hol-land, and an underground conduit electric rail-way in Buda-Pesth, Austria-Hungary.

A HINT FROM PARIS. The compressed air line at Paris the city which has served as a model for Washington in so many respects runs through the park of Vincennes to Nogent and Ville Evrard. It is in general a suburban line, but traverses also some narrow and well-traveled streets. It is



in the road. I know nothing of the profits or osses of this particular line, though it seems to be reasonably popular and well patronized, but a similar railway at Nantes, France, has been operated for ten years and makes reports of its expenses and carnings which, if reliable, show that the pneumatic is cheaper and more profit-able even than the trolley system. The Compagnie Generale des Omnibus of Paris have, it id, determined to use compressed air as a motive power upon suburban lines between Paris, and, Sevres and Versailles. The same kind St. Cloud. Sevres and versames. The same kind of motor is reported to be used upon a railway in Berne. Switzerland. In the French com-pressed air system each car is supplied with its own motor and there is no conduit like that which characterized the compressed air system that proved a failure on the 7th street road or Brightwood avenue in the suburbs of this city.

THE HAGUE'S SUGGESTION. storage battery line at the capital of Holland runs from the heart of the city to Scheveningen, the fashionable and famous seaful during the season against the competition of steam and against the rivalry of a horse fifths as great. The rapid or trade of the season against the rivalry of a horse fifths as great. railway that follows a cool and shady course through a most beautiful park, while the electric road runs for part of its route through an almost maked plain. The cars are large and heavy, rapid in movement and attractive to the eye. The Hague is not unworthy to furnish a suggestion to Washington, between which and Hague, for centuries the political capital of the States General, was until the time of Louis Philippe denied the right to vote in the assembly of states; in that it is and always has been the favorite residence of the ruling and wealthy class: in that its prosperity is due to its political character and its residence of the ruling and wealthy class: in that its prosperity is due to its political character and its residence of the rails can be improved. But the fact remains that in spite of minor and easily remedied defects this system has proved commercially practicable and a remarkable success upon the leading railway of a city of half a million people, the most enterprising. is due to its political character and its residence attractions and not to internal resources progressive and rapidly developing capital todence attractions and not to internal of the town itself, and in that it surpasses all other Dutch towns in broad and handsome set sets and spacious parking. The example set by the capital of Holland is to be followed on an extensive scale, the newspapersannounce, by the capital of Germany and the capital of France, the united street car lines of Berlin and the Compagnic Generale des Omnibus of Paris having decided to take this step. Storage buttery cars are already used to a slight extent in Paris and London. It seems to the capital of the multitude quickly over the principal streets of a great city.

These three European railways to which reference has been made demonstrate that the troiley is not essential to practical rapid transit either in suburban or special season service or in the constant and vast labor of transporting the multitude quickly over the principal streets of a great city.

These three European railways to which reference has been made demonstrate that the troiley is not essential to practical rapid transit either in suburban or special season service or in the constant and vast labor of transporting the multitude quickly over the principal streets where the capital of particular and the capital of the multitude quickly over the principal streets of a great city. in Paris and London. It seems never to occur to these benighted foreigners that in order to keep pace with modern civilization they must deface and endanger their streets with the

THE EXAMPLE SET BY BUDA-PESTIF. In Buda-Pesth, the enterprising and progress-In Buda-Pesth, the enterprising and progressive capital of Hungary. I rode all over the city in the neat and attractive cars that are propelled smoothly, rapidly and at an easily regulated speed by electricity as the motive power. The Buda-Pesth railway is an underground found road with an open slotted conduit of concrete, having iron yokes spaced about four feet.

apart, resembling somewhat the conduit con-struction of a cable road. The slot, however, is in a split rail, the conduit lying immediately under one of the running rails, and the feed and return current pass through a pair of conductors attached to either side of the iron yokes. The current is supplied at a constant potential of 300 volts, something over one-half as powerful as the trolley current. The rails do not serve as conductors. The conductors order to keep them from moisture, and the conduit, which is 27.5 inches deep, is furnished with catch pits to carry off the drainage. The conductors are also entirely proected under the running rails, so that they Rapid Transit in Large Cities Washing | cannot catch rain or dirt and may not be seen or touched from the slot.

THE BUDA-PESTH STREET RAILWAYS

CURRENT LEAKAGE IN RAINY, SNOWY WEATHER is one of the bugsboos employed to frighten the public from the use of the underground electric conduit. The experience of Buda-Pesth, where the atmospheric conditions are more trying than in Washington, and where



RUDA-PESTH CLOSED CAR. the streets are no cleaner and no better drained shows that practically this leakage is not a serious affair, if simple devices are adopted for reducing it to a minimum. Osborne Howes re-ported to the Boston rapid transit commission concerning this point that the electric cars of Buda-Pesth experienced no more trouble with ordinary horse cars. "There was some delay. winter was one of exceptional severity in Huncontinuously for more than three months."
The nominal rate of speed is eight miles ber
hour. At night and in some parts of the soute

eleven miles per hour are permitted. In densely crowded streets 6.2 miles are the limit, some narrow and well-traveled streets. It is capable of a high rate of speed and the machine seems to be under absolute control. It is practically noiseless, except that a slight grinding sound is produced as the car wheels pass curves three years, with a total length of track of twelve three years, with a total length of track of twelve miles, and the larger part of the lines have double tracks. These lines are marked on the accompanying map of Euda-Pesth, and are known as the Station Street line, opened July 30, 1889, the Podmaniczky Street line, opened September 10, 1889, the Grosse-Ringstrasse line, opened March 6, 1890, and the King Street ine, opened last year. Other extensions of the system are proposed. The Podmaniczky Street line runs from the academy in the heart of Pesth to the principal railroad station and the extensive public park of the city, the Stadtwaldchen. The Grosse-Ringstrasse line traverses the finest of the great boulevards that Buda-Pesth has of late years been constructing. It is a broad street, lined for a considerable part of its length with imposing buildings. The King Street line parallels Andrassy street, the show street of the city, to Buda-Pesth what the Ringstrasse is to Vienna, Unter den Linden to Berlin and the boulevards to Paris. During 1891 the number of persons carried on the elec-tric line was nearly double that of 1890 and the receipts were increased proportionately. The reports of the Buda-Pesth horse railroad, the competitor of the electric road, for the same period show for 1891 a slight decrease in the number of passengers carried from the figures of 1890, and the income per mile has also fallen. The horse railway carried less than half as many passengers and received only 62 per cent as great an income per mile a month. It is pointed out in the Engineering News that the Buda-Pesth electric road is remarkably successful among Austrian railways as regards passengers carried and gross income per mile, for even on the almost constantly crowded lines of the

fifths as great. The rapid extension of the system as well as the well-filled cars and the excellent showing of earnings demonstrate THE POPULARITY AND SUCCESS OF THE ROAD. Various improvements that can easily be made have suggested themselves as desirable in perfecting the system for American use. The cost strong resemblance is noted, in that The of construction can be cheapened, the slot can gue, for centuries the political capital of the be made narrower, the contact frame stronger the time of Louis and the pattern of the rails can be improved

day in all Europe.

These three European railways to which ref-

Washingtonian because the conditions more closely resemble those that confront this city. STRIKING POINTS OF SIMILABITY

between the Hungarian and American capitals. As Washington has acquired its main development and adornment since the war of 1861-65.

embodiment and material manifestation of national sentiment and national pride. The tardy but now vigorous co-operation of the Union with the capital's residents in bringing to perfection the Union's city is a part of current history. So in Buda-Pesth: "The ministry and the municipal authorities co-operated and building operations were intrusted to a mixed commission of the national and city governments." Buda-Pesth, pushed forward by the national pride of 17,000,000 of progressive and ambitious people, has with its half million of population become the Minneapolis of of population become the Minneapolis of of population become the Minneapolis of Europe as a milling center, the Chicago of Europe in wouderful push and rapidity of growth, and a new Paris in beauty. Washington's development is not less remarkable, and as it has behind it the national sentiment and national pride of 65,000,000 Americans, causing it to show forth in miniature the great republic its aspirations are not limited by the mark of Buda-Pesth's present or future achievements, or by those recorded of any of the world's

MORSE-CAR LINE

Andrassy street, the pride of the Hungarian apital, is a straight street like our avenues and like Unter den Linden in Berlin; but Buda-Pesth has also broad, curving, ring streets in course of development like the Parisin boulevards and the magnificent Vicunese Ringstrasse, which we lack. Some day, however, Washington will have a "Ringstrasse" or boulevard washington win have a language of bodie-vard traversing the series of parks between the Capitol and monument and the new-made park on the Potomac, following the line of Rock creek through Rock Creek Park and crossing to and traversing Soldiers' Home. This boule-vard in interest and attractiveness of surround-ings will compare favorably with any in the world, and will be worthy of the American cap-

Buda-Pesth maintains free public baths in the Danube, a pointed reminder to Washing-

Pesth street railways; 'At the expiration of existing charters the street railway lines and equipment will become the property of ity, without indemnity to the private s." On the other side of the water the

ably profitable in Europe and that have proved successful in this country, too, so far as tested, until the country, too, so far as tested, until the great electric companies, which are purphing the trolley, have absorbed the inventure who have been developing better motters and have obtained control of the rail-ways upon which their experiments have been conducted, after which event the other motors and have obtained control of the rail-ways upon which their experiments have been conducted, after which event the other motors than the trolley have been quickly demonstrated to be failures. In the light of European examples the words commercially impracticable, when applied to pneumatic storage battery and unor ground conduit purposed to it. But it is to be read that they are unprofitable, but morely that the conditions that exist first at least they will not enable stock-holders to get rich quite so fast as the trolley.

A URFUL DUT NOT A UNIVERSAL MOTON.

I do not mean to unjustly depreciate the trolley with the dear they will not enable stock-holders to get rich quite so fast as the trolley are constantly coming in contact, and motor many suburban and sparsely settled regions and ambitious villages have been built up which could not under the conditions that exist the charge battery, which it electric light current. The various could not under the conditions that exist the charge battery and the electric experiment of its neighbor. All should be buried in underground conduit, and pending this burial no additions to the network of overhead with such as a charge of the trolley within the last four of five years.

Small, growing towns, especially in the west, have employed the overhead electric system as ne motor many suburban and sparsely settled regions and ambitious villages have been built up which could not under the conditions that existed have secured rapid transit in any other way. There is something wonderful and inspiring in the impetus to rapid transit given all over the country by the campaign in behalf of the trolley within the last four or five years. Small, growing towns, especially in the west, have employed the overhead electric system as a new means both of development and advertisement, and even the large cities, for use in whose streets it is unsuited, have been awakened by the persistent knocking of the trolley advocates at the municipal doors to the necessal to the streets favored by their advocates at the municipal doors to the necessal to the streets favored by their assistance.

the danger point in the electric current. Sir

Wm. Thompson, Dr. C. W. Siemens and other eminent electricians reached the conclusion in a parliamentary investigation in England that a current of 300 volts is the limit of safety. The trolley current is 500 volts. For a considerable time this current, while it killed horses, could not be convicted of destroying human life, and some individuals certainly received its full shock with no further injury than a blistering and a general shaking up. In view of these

facts many who were anxious only to learn the or to a single source of power supply to bring truth were disposed to believe that the safety limit set by the British electricians might be reasonably increased. But within the last year there have been at least two deaths from the shock of the current of 500 volts or less, and of double track and 1.13 miles of single track. snock of the current of 300 volts or less, and of double track and 1.13 miles of single track, we are all at sea again in our calculations. It is also to be remembered that the wires are not rendered harmless by reducing the tension below the point which means death to and some other American cities have, it is said, the average man. Accidents to persons experimented successfully on a small scale THE CITY OF WASHINGTON

EXISTING AND PROPOSED MECHANICAL MOTOR STREET RAILWAYS OF WASHINGTON

which involve the privilege of occupying and using public streets, a grip is retained in the public interest upon all such franchises, stringent conditions are imposed for the protection of the people against danger and against imposition, and the primary object in granting these franchises is the convenient and rapid transportation of the public, with only reasonable profits to the semi-public servants who undertake this task. On this side of the water too often the corporation which deigns to too often the corporation which deigns to transport the public treats the streets of which gratuitous use has been granted it as its own exclusive private property. Paying nothing for the use of these streets, it often appears in court as evading taxation upon property that it owns, and entirely uncontrolled by the pub-lic wishes or welfare as to motive power owns, and entirely uncontrolled by the pub-lic wishes or welfare as to motive power and equipment it makes its own en-richment the primary object, and pronounces "commercially impracticable" any improve-ment merely for the benefit of the public, which temporarily or permanently may reduce its dividends.

SQUEEZING THE ALMIGHTY DOLLAR. apness is the great virtue of the trolley and in the eyes of the street railways that virtue incapable of covering a multitude of sins. The trolley's superior cheapness causes the cry of "commercially impracticable" in re-

and experiments in New York upon dors with the pneumatic motor for street show a wide variation in individual powers of resistance to electricity. Some endure shocks with the pneumatic motor for street railway purposes. It was expected that such which would ordinarily be expected to prove fatal, while others succumb to a much feebler the conduit pneumatic system had failed to

The Port Huron Electric Railway Company, reporting concerning the case of the lineman killed by its trolley wire in August, says: "We tested our current twice during the same day and found that it was running at 500 volts and a little under at times. There was no post-mortem made, the man to all appearances being strong and healthy. The current, you will notice, passed directly through the left side, and may thus have caused a fatality that under other circumstances would not have happened."

In this case, by the railway's admission, a

which would ordinarily be expected to prove fatal, while others succumb to a much feebler shock, the result depending upon the physical condition of the victim and other special circumstances. One is not encouraged to expose himself to be struck by lightning by the reflection that some persons have recovered from such shocks, or by the suggestion that the artificial current which threatens him is a few volts below the number which will certainly kill him, and that if his physical condition is all right he may possibly pull through with his life.

KILLED BY THE TROLLEY.

The Port Hurow Electric Railway Company, reporting concerning the case of the lineman killed by the case of the lineman killed by the superstances. In the Eckington, Georgetown and Rock Creek suburban lines, with a combined double trackage of over fourteen miles, it has as fine specimens of this ELECTRIC CONDUITS IN WASHINGTON.

The urban extension of the Rock Creek road The urban extension of the Rock Creek road, the trolley being barred by law, will use an underground conduit, similar to one successfully tested in Chicago, and in the general principles of construction something like the Buda Pesth road. There are obvious drawbacks to the cheap operation of one end of a railway line by a motive power system different from that by which the greater part of the road is